Dear Sir or Madam,

I would like to comment on the FCC's docket 03-104, which would allow the use of Broadband over the Power Lines (BPL).

Approximately 5 years ago, wireless modem jacks were introduced and connected to the AC power lines in homes and businesses. This now older technology, allowed under the FCC Part 15 rules, facilitated the connection of phone line compatible devices through a structure's internal wiring. The modems were commonly used for low-speed PC applications, digital cable converters, and satellite TV installations. Under FCC Part 15 rules the devices were not to interfere with other radio services.

One particular wireless modem jack operated with a carrier frequency between 3.5 and 3.55MHz, which is the lower end of the 80-meter amateur radio band. Initially unaware of their implementation, I began hearing an ever-increasing number of buzzing RF carriers. At times, the RF carriers were FM modulated with telephone conversations introduced by phone equipment connected to the modem system. Eventually, the carriers became so intrusive that I was no longer able to use the low end of 80 meters for effective amateur radio communications.

Five years later the situation is little changed even though the modem's application has become increasingly obsolete. It exists because a technology that shouldn't have caused interference to other radio services has continued to do so. The producer of the original offending modem did make engineering changes to newer modems, but many of the older units are still in place today radiating from the installation's power lines.

Using the wireless modem jack example it has been demonstrated that manufacturers, installers, or FCC may not take the necessary steps to assure that a new technology doesn't interference with other radio services. The new BPL equipment and installation environment, which is classified as an intentional radiator, will radiate in a frequency spectrum shared by many other services (1.7 to 80MHz). Services such as the Amateur Radio Service, which serves the general public in health and welfare situations, could find their frequency allocations unusable due to excessively high noise levels. Amateur radio, a not-for-profit radio service by law, has little means to resolve such a potentially huge RF interference problem posed by BPL. There are no guarantees that intentional radiation from in-compliance BPL installations will not severely impact this and other radio services.

Although I am only somewhat familiar with BPL technology, I do understand that it requires the power distribution system be balanced to prevent excessive RF radiation. The thought of utilizing an existing wiring system within homes, business, factories and overhead lines is enticing from a cost and ease of installation standpoint. But does the technology exist that will assure the necessary RF balanced conditions exist throughout all electrical systems such where BPL would be deployed? I expect that it doesn't and won't ever be the case. The numerous BPL tests conducted in Europe and Japan leads me to believe that BPL cannot be implemented on a non-interfering basis.

The wireless modem jacks found limited application and installation around the country; yet they were and still are a considerable source of RF interference in many locals. Many amateur radio operators have faced the same unresolved interference problems that I have. There is little doubt that the implementation of BPL, with its promises of easy wireless Internet access throughout homes and businesses, will be much more widespread. If BPL technology isn't absolutely

100% non-interfering, the RF radiating from nearby homes, businesses and overhead lines will likely overwhelm any other services in the shared frequency spectrum

I am not in favor of stifling the advancement of new communications technology; however, I am also not in favor of putting potentially “RF dirty” systems on line in our homes and businesses. Only when the technology can be proven not to interfere with any other service, should it be considered for implementation.

Recognizing the pressure the commission will receive from business interests concerned with BPL and its potential markets, I urge the commission to not move forward with its implementation without guarantees that it can co-exist with other radio services on a completely non-interfering basis.

The FCC has promised to protect all licensed users of the radio spectrum. We are holding you to that promise.

Sincerely,

Thomas Kuehl

Amateur Radio Station, AC7A